

Claims

1. A catheter comprising:
  - a handle;
  - a shaft portion coupled to a distal end of the handle;
  - a tip portion;
  - a braided conductive member coupled to the shaft portion and the tip portion; and
  - a mandrel fixedly attached to the tip portion and slidably disposed within the shaft portion;

wherein actuation of the mandrel expands the braided conductive member from an undeployed position in which the braided conductive member assumes a generally cylindrical configuration to a deployed position in which the braided conductive member assumes a disk-like configuration.
2. The catheter of claim 1, wherein the mandrel comprises at least two tiers having different diameters.
3. The catheter of claim 2, wherein the mandrel comprises three tiers having different diameters.
4. The catheter of claim 1, wherein the braided conductive member comprises an electrode having insulated and uninsulated portions.
5. The catheter of claim 4, wherein the braided conductive member further comprises a plurality of electrically independent portions.
6. The catheter of claim 5, wherein uninsulated portions of electrically independent portions of the braided conductive member do not contact each other in the deployed or undeployed position.
7. The catheter of claim 1, wherein the mandrel comprises a lumen having a distal opening.

65. The method of claim 62, wherein the means for increasing the compression of the spring comprises a plurality of complimentary mating features disposed on a surface of the thumbwheel and on a surface of the housing that force the thumbwheel into tighter engagement with the compression spring when the thumbwheel is moved from a first position to a second position.

66. The catheter of claim 1, wherein braided conductive member comprises a plurality of partially insulated filaments.

67. The catheter of claim 66, wherein each filament of the plurality of partially insulated filaments is insulated so as to remain electrically isolated from each other filament of the plurality of partially insulated filaments during actuation the mandrel.

68. The catheter of claim 66, wherein the plurality of partially insulated filaments comprises an uninsulated circumferential band.

69. The catheter of claim 68, wherein the uninsulated circumferential band is distally facing.

70. The catheter of claim 1, wherein the braided conductive member comprises a plurality of helically wound filaments.